(9)

DETAILED ESTIMATE

For the Work of

"Improvements to Road and Drains at HMT Layout 3rd, 4th, 5th Block and Surrounding area in Ward No.09 (Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)

9)Improvements to Road and Drains at HMT Layout 3rd, 4th, 5th Block and Surrounding area in Ward No.09 (Vidyaranyapura)

								Estimation Cost.Rs	20000000.00
Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))								
	Culvert								
	HMT 3rd Block								
		Cum	1	6.40	1.50	0.23	2.21		
		Cum	1	6.10	1.50	0.23	2.10		
		Cum	1	6.80	1.50	0.23	2.35		
		Cum	3	5.50	1.50	0.23	5.69		
	HMT 5th Block								
		Cum	1	6.30	1.50	0.23	2.17		
		Cum	1	6.70	1.50	0.23	2.31		
	HMT 4th Block	Cum	2	7.10	1.50	0.23	4.90		
	Basic rate	731.00							
	Area weightage 10%	73.10							
	Sub Total	**804.10**							
	Total						**21.74**	**804.10**	**17478.00**
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) (Data Rate)								
	BS slab of Drain	**Sqm**							
	Open Drain (Sides & Bottom)	**Sqm**	Width=Perimeter of Drain in U Shape						
	HMT 3rd Block								
	8th Main Road	Sqm	2	218.90	1.35		591.03		
					Total		**591.03**		
	Deduct 30% for Missing/Damaged						177.31		
	Consider 70% Qnty for Removing & Refixing						413.72		
					Sub Total		**413.72**		
	Data rate	**121.00**							
	Total						**413.72**	**121.00**	**50061.00**
3	Removing and resetting of footpath slab (Data Rate)								
	Precast Cover Slab	**Sqm**							
	13th Main Road	Sqm	1	255.00	1.20		306.00		
					Total		**306.00**		
	Deduct 50% for Missing/Damaged						153.00		
	Consider 50% Qnty for Removing & Refixing						153.00		
					Sub Total		**153.00**		
	Data rate	**235.00**							
	Total						**153.00**	**235.00**	**35955.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
4	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	HMT 1st Block								
	14th Main Road								
	RHS & LHS -	Cum	2	170.00	1.10	1.05	392.70		
	HMT 5th Block Thindlu								
	5th Main Road Main Road	Cum	1	195.00	1.10	1.05	225.23		
	HMT 3rd Block								
	10th Cross Road RHS & LHS	Cum	2	227.00	1.10	1.05	524.37		
	13th Main Road LHS	Cum	1	255.00	1.10	1.05	294.53		
	Culvert								
	HMT 3rd Block								
		Cum	1	6.40	1.40	0.95	8.51		
		Cum	1	6.10	1.40	0.95	8.11		
		Cum	1	6.80	1.40	0.95	9.04		
		Cum	3	5.50	1.40	0.95	21.95		
	HMT 5th Block								
		Cum	1	6.30	1.40	0.95	8.38		
		Cum	1	6.70	1.40	0.95	8.91		
	HMT 4th Block	Cum	2	7.10	1.40	0.95	18.89		
	Desilt								
	HMT 3rd Block								
	8th Main Road	Cum	2	218.90	0.45	0.45	88.65		
	13th Main Road	Cum	1	255.00	0.60	0.75	114.75		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**1724.01**	**204.60**	**352734.00**
5	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
		Sqm							
	Provide 30% for Missing/Damaged	From item no.02					**177.31**		
	Basic rate	700.00							
	Area weightage 6%	42.00							
	Sub Total	**742.00**							
	Total						**177.31**	**742.00**	**131564.00**
6	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	HMT 1st Block								
	14th Main Road								
		Cum	2	170.00	1.10	0.15	56.10		
	HMT 5th Block								
	5th Main Road	Cum	1	195.00	1.10	0.15	32.18		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	HMT 3rd Block								
	10th Cross Road	Cum	2	227.00	1.10	0.15	74.91		
	13th Main Road	Cum	1	255.00	1.10	0.15	42.08		
	Culvert								
	HMT 3rd Block								
		Cum	1	6.40	1.40	0.15	1.34		
		Cum	1	6.10	1.40	0.15	1.28		
		Cum	1	6.80	1.40	0.15	1.43		
		Cum	3	5.50	1.40	0.15	3.47		
	HMT 5th Block								
		Cum	1	6.30	1.40	0.15	1.32		
		Cum	1	6.70	1.40	0.15	1.41		
	HMT 4th Block	Cum	2	7.10	1.40	0.15	2.98		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**218.49**	**6327.20**	**1382430.00**
7	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Bottom Raft	Cum							
	HMT 1st Block								
	14th Main Road								
		Cum	2	170.00	0.90	0.15	45.90		
	HMT 5th Block								
	5th Main Road	Cum	1	195.00	0.90	0.15	26.33		
	HMT 3rd Block								
	10th Cross Road	Cum	2	227.00	0.90	0.15	61.29		
	13th Main Road	Cum	1	255.00	0.90	0.15	34.43		
	Side Wall								
	HMT 1st Block								
	14th Main Road								
		Cum	4	170.00	0.15	0.75	76.50		
	HMT 5th Block								
	5th Main Road	Cum	2	195.00	0.15	0.75	43.88		
	HMT 3rd Block								
	10th Cross Road	Cum	4	227.00	0.15	0.75	102.15		
	13th Main Road	Cum	2	255.00	0.15	0.75	57.38		
					Sub Total		**447.84**		
	Culvert								
	Bottom Raft	Cum							
	HMT 3rd Block								
		Cum	1	6.40	1.20	0.20	1.54		
		Cum	1	6.10	1.20	0.20	1.46		
		Cum	1	6.80	1.20	0.20	1.63		
		Cum	3	5.50	1.20	0.20	3.96		
	HMT 5th Block								
		Cum	1	6.30	1.20	0.20	1.51		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
		Cum	1	6.70	1.20	0.20	1.61		
	HMT 4th Block	Cum	2	7.10	1.20	0.20	3.41		
	Side Wall								
	HMT 3rd Block								
		Cum	2	6.40	0.23	0.60	1.77		
		Cum	2	6.10	0.23	0.60	1.68		
		Cum	2	6.80	0.23	0.60	1.88		
		Cum	6	5.50	0.23	0.60	4.55		
	HMT 5th Block								
		Cum	2	6.30	0.23	0.60	1.74		
		Cum	2	6.70	0.23	0.60	1.85		
	HMT 4th Block	Cum	4	7.10	0.23	0.60	3.92		
					Sub Total		**32.51**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**480.35**	**7225.68**	**3470841.00**
8	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					447.84		
		kg	Steel assumed 60Kg/Cum of Concrete				26870.40		
		tonne					**26.87**		
	For Culvert	Cum					32.51		
		kg	Steel assumed 90 Kg/Cum of Concrete				2925.72		
		tonne					**2.93**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**29.80**	**113661.90**	**3386684.00**
9	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand) (PWD SR 2021-22 Vol -II Pg 9 item no 5.4)								
	13th Main Road	Cum	2	255.00	0.45	0.90	206.55		
					Sub Total		206.55		
	Deduct 30% for Missing/Damaged						61.97		
	Basic rate	5422.00							
	Area weightage 10%	542.20							
	Sub Total	**5964.20**							
	Total						**61.97**	**5964.20**	**369572.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
10	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paidseparately) Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates (PWD SR 21-22 Vol I Pg no 17 Item No 2.4.1)								
	Bed Conctere For SSm Drain								
	13th Main Road	Cum	1	255.00	0.60	0.15	22.95		
	Copping Concrete								
	For SSM Drain								
	13th Main Road	Cum	2	255.00	0.45	0.10	22.95		
	Basic rate	6096.00							
	Area weightage 10%	609.60							
	Sub Total	**6705.60**							
	Total						**45.90**	**6705.60**	**307788.00**
11	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Provide Missing Slab	Sqm	Form item no-03				153.00		
	HMT 1st Block								
	14th Main Road								
		Sqm	2	170.00	0.90		306.00		
	HMT 5th Block								
	5th Main Road	Sqm	1	195.00	0.90		175.50		
	HMT 3rd Block								
	10th Cross Road	Sqm	2	227.00	0.90		408.60		
	13th Main Road	Sqm	1	255.00	0.90		229.50		
	Data rate	**2072.00**							
	Total						**1272.60**	**2072.00**	**2636828.00**
12	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab	Sqm							
	HMT 3rd Block								
		Sqm	1	6.40	1.20		7.68		
		Sqm	1	6.10	1.20		7.32		
		Sqm	1	6.80	1.20		8.16		
		Sqm	3	5.50	1.20		19.80		
	HMT 5th Block								
		Sqm	1	6.30	1.20		7.56		
		Sqm	1	6.70	1.20		8.04		
	HMT 4th Block	Sqm	2	7.10	1.20		17.04		
	Data rate	**5037.00**							
	Total						**75.60**	**5037.00**	**380798.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
13	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	Road Cut Portion	**Cum**							
	HMT 3rd Block								
	8th Main Road	Cum	1	8.50	1.20	0.23	2.35		
		Cum	3	3.30	1.30	0.23	2.96		
		Cum	1	6.60	2.30	0.23	3.49		
		Cum	2	8.00	3.20	0.23	11.78		
		Cum	1	218.90	0.60	0.23	30.21		
	10th Cross Road	Cum	1	9.90	2.20	0.23	5.01		
		Cum	3	3.00	1.90	0.23	3.93		
		Cum	3	6.60	2.40	0.23	10.93		
		Cum	1	9.00	2.60	0.23	5.38		
		Cum	2	5.50	1.30	0.23	3.29		
		Cum	1	4.50	1.60	0.23	1.66		
		Cum	1	227.00	0.75	0.23	39.16		
	HMT 1st Block								
	14th Main Road								
		Cum	2	170.00	1.00	0.23	78.20		
	8th A main Road	Cum	1	12.50	2.30	0.23	6.61		
		Cum	2	11.90	1.90	0.23	10.40		
		Cum	1	10.50	1.30	0.23	3.14		
		Cum	2	8.40	3.10	0.23	11.98		
		Cum	3	7.90	1.60	0.23	8.72		
		Cum	2	9.90	2.10	0.23	9.56		
		Cum	3	7.70	2.40	0.23	12.75		
		Cum	2	160.00	0.30	0.23	22.08		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**283.59**	**71.50**	**20277.00**
14	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A)								
	Road Cut Portion	Cum							
	HMT 3rd Block								
	8th Main Road	Cum	1	8.50	1.20	0.23	2.35		
		Cum	3	3.30	1.30	0.23	2.96		
		Cum	1	6.60	2.30	0.23	3.49		
		Cum	2	8.00	3.20	0.23	11.78		
		Cum	1	218.90	0.60	0.23	30.21		
	10th Cross Road	Cum	1	9.90	2.20	0.23	5.01		
		Cum	3	3.00	1.90	0.23	3.93		
		Cum	3	6.60	2.40	0.23	10.93		
		Cum	1	9.00	2.60	0.23	5.38		
		Cum	2	5.50	1.30	0.23	3.29		
		Cum	1	4.50	1.60	0.23	1.66		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
		Cum	1	227.00	0.75	0.23	39.16		
	HMT 1st Block								
	14th Main Road								
		Cum	2	170.00	1.00	0.23	78.20		
	8th A main Road	Cum	1	12.50	2.30	0.23	6.61		
		Cum	2	11.90	1.90	0.23	10.40		
		Cum	1	10.50	1.30	0.23	3.14		
		Cum	2	8.40	3.10	0.23	11.98		
		Cum	3	7.90	1.60	0.23	8.72		
		Cum	2	9.90	2.10	0.23	9.56		
		Cum	3	7.70	2.40	0.23	12.75		
		Cum	2	160.00	0.30	0.23	22.08		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**283.59**	**2633.40**	**746794.00**
15	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	Road Cut Portion								
	HMT 3rd Block								
	8th Main Road	Sqm	1	8.50	1.20		10.20		
		Sqm	3	3.30	1.30		12.87		
		Sqm	1	6.60	2.30		15.18		
		Sqm	2	8.00	3.20		51.20		
		Sqm	1	218.90	0.60		131.34		
	10th Cross Road	Sqm	1	9.90	2.20		21.78		
		Sqm	3	3.00	1.90		17.10		
		Sqm	3	6.60	2.40		47.52		
		Sqm	1	9.00	2.60		23.40		
		Sqm	2	5.50	1.30		14.30		
		Sqm	1	4.50	1.60		7.20		
		Sqm	1	227.00	0.75		170.25		
	HMT 1st Block								
	14th Main Road								
		Sqm	2	170.00	1.00		340.00		
	8th A main Road	Sqm	1	12.50	2.30		28.75		
		Sqm	2	11.90	1.90		45.22		
		Sqm	1	10.50	1.30		13.65		
		Sqm	2	8.40	3.10		52.08		
		Sqm	3	7.90	1.60		37.92		
		Sqm	2	9.90	2.10		41.58		
		Sqm	3	7.70	2.40		55.44		
		Sqm	2	160.00	0.30		96.00		
	Provide 20% Profile Correction for old Road								
	HMT 3rd Block								
	8th Main Road	Sqm	0.2	218.90	6.00		262.68		
	10th Cross Road	Sqm	0.2	227.00	6.20		281.48		
	HMT 1st Block								
	14th Main Road	Sqm	0.2	170.00	5.20		176.80		
	8th A main Road	Sqm	0.2	160.00	5.30		169.60		
	Basic rate	44.00							
	Area weightage 10%	4.40							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Sub Total	**48.40**							
	Total						**2123.54**	**48.40**	**102780.00**
16	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	Road Cut Portion								
	HMT 3rd Block								
	8th Main Road	Cum	1	8.50	1.20	0.05	0.51		
		Cum	3	3.30	1.30	0.05	0.64		
		Cum	1	6.60	2.30	0.05	0.76		
		Cum	2	8.00	3.20	0.05	2.56		
		Cum	1	218.90	0.60	0.05	6.57		
	10th Cross Road	Cum	1	9.90	2.20	0.05	1.09		
		Cum	3	3.00	1.90	0.05	0.86		
		Cum	3	6.60	2.40	0.05	2.38		
		Cum	1	9.00	2.60	0.05	1.17		
		Cum	2	5.50	1.30	0.05	0.72		
		Cum	1	4.50	1.60	0.05	0.36		
		Cum	1	227.00	0.75	0.05	8.51		
	HMT 1st Block								
	14th Main Road								
		Cum	2	170.00	1.00	0.05	17.00		
	8th A main Road	Cum	1	12.50	2.30	0.05	1.44		
		Cum	2	11.90	1.90	0.05	2.26		
		Cum	1	10.50	1.30	0.05	0.68		
		Cum	2	8.40	3.10	0.05	2.60		
		Cum	3	7.90	1.60	0.05	1.90		
		Cum	2	9.90	2.10	0.05	2.08		
		Cum	3	7.70	2.40	0.05	2.77		
		Cum	2	160.00	0.30	0.05	4.80		
	Provide 20% Profile Correction for old Road								
	HMT 3rd Block								
	8th Main Road	Cum	0.2	218.90	6.00	0.05	13.13		
	10th Cross Road	Cum	0.2	227.00	6.20	0.05	14.07		
	HMT 1st Block								
	14th Main Road	Cum	0.2	170.00	5.20	0.05	8.84		
	8th A main Road	Cum	0.2	160.00	5.30	0.05	8.48		
	Basic rate	9889.00							
	Area weightage 10%	988.90							
	Sub Total	**10877.90**							
	Total						**106.18**	**10877.90**	**1154983.00**
17	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	HMT 3rd Block								
	8th Main Road	Sqm	1	218.90	6.00		1313.40		
	10th Cross Road	Sqm	1	227.00	6.20		1407.40		
	HMT 1st Block								
	14th Main Road	Sqm	1	170.00	5.20		884.00		
	8th A main Road	Sqm	1	160.00	5.30		848.00		
	Basic rate	15.00							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**4452.80**	**16.50**	**73472.00**
18	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16C)								
	HMT 3rd Block								
	8th Main Road	Cum	1	218.90	6.00	0.04	52.54		
	10th Cross Road	Cum	1	227.00	6.20	0.04	56.30		
	HMT 1st Block								
	14th Main Road	Cum	1	170.00	5.20	0.04	35.36		
	8th A main Road	Cum	1	160.00	5.30	0.04	33.92		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**178.11**	**12684.10**	**2259191.00**
19	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
	HMT 3rd Block	Sqm							
	8th Main Road	Sqm	2	218.90	0.10		43.78		
	10th Cross Road	Sqm	2	227.00	0.10		45.40		
	HMT 1st Block								
	14th Main Road	Sqm	2	170.00	0.10		34.00		
	8th A main Road	Sqm	2	160.00	0.10		32.00		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**155.18**	**525.80**	**81594.00**
20	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Qty Vide frm Item No-01+04+13	**Cum**					**2029.33**		
	Total						**2029.33**	**129.80**	**263408.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
21	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-20	**t.Km**		2029.33	1.28		**2597.55**		
	Total						**2597.55**	**105.60**	**274302.00**
	Basic rate	**12.00**							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
								Grand Total	**17499534.00**
								GST Charges (12% of estimated cost)	**2099945.00**
								DPR Charges (1% of estimated cost)	**200000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**200000.00**
								Miscellenious and rounding	**521.00**
								Total Amount	**20000000.00**
									RUPEES TWO CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

PRASAD CONSULTANTS
BANGALORE

10

DETAILED ESTIMATE

For the Work of

"Improvements to Road and Drains at Durga Layout Sapthagiri Layout and Surrounding Area in Ward NO 09(Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)

10) Improvements to Road and Drains at Durga Layout Sapthagiri Layout and Surrounding Area in Ward NO 09 (Vidyaranyapura)

								Estimation Cost.Rs	10000000.00
Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))								
	Durga Layout								
	8th Cross Road	Cum	1	7.70	1.80	0.23	3.19		
	4th Cross Road	Cum	1	7.60	1.50	0.23	2.62		
	4th Cross Road	Cum	1	7.40	1.80	0.23	3.06		
	Basic rate	731.00							
	Area weightage 10%	73.10							
	Sub Total	**804.10**							
	Total						**8.87**	**804.10**	**7136.00**
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) (Data Rate)								
	BS Drain Cover Slab	Sqm							
	Durga Layout	Sqm							
	1st Cross Road	Sqm	1	156.10	0.90		140.49		
						Total	**140.49**		
	Deduct 30% for Missing/Damaged						42.15		
	Consider 70% Qnty for Removing & Refixing						98.34		
						Sub Total	**98.34**		
	Data rate	**121.00**							
	Total						**98.34**	**121.00**	**11900.00**
3	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	Durga Layout								
	1st Cross Road	Cum	1	156.10	1.10	1.05	180.30		
	4th Main Road	Cum	2	165.00	1.10	1.05	381.15		
	Sapthagiri Layout								
	1st Cross Road	Cum	2	121.00	1.10	1.05	279.51		
	Culvert								
	Durga Layout								
	8th Cross Road	Cum	1	7.70	1.70	0.95	12.44		
	4th Cross Road	Cum	1	7.60	1.40	0.85	9.04		
	4th Cross Road	Cum	1	7.40	1.70	0.95	11.95		
	Sapthagiri Layout								
	1st Cross Road	Cum	1	5.10	1.40	0.95	6.78		
		Cum	2	5.20	1.40	0.95	13.83		
		Cum	1	5.90	1.40	0.95	7.85		
	Desilt								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Durga Layout								
	1st Cross Road	Cum	1	156.10	0.45	0.45	31.61		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**934.46**	**204.60**	**191191.00**
4	Providing B S slabs of selected quality roughly dressed havinf a size of 10cms thick and fixed in cement mortar (1:6) including fixing curing ete, complete as directed by the Engineer in Charge of the work(Excluding GST and Area Leading Charges)(Data Rate)								
		Sqm							
	Provide 30% for Missing/Damaged	From item no.02					**42.15**		
	Data rate	**837.00**							
	Total						**42.15**	**837.00**	**35278.00**
5	Providing one line dressing to granite stone slab / granite stone masonry as per specifications as directed by the Engineer in Charge of the work(Excluding GST and Area Leading Charges)(Data Rate)								
		Sqm							
	For B S Slab	From total quantity of BS Cover of item no.02					**140.49**		
	Date Rate	**242.00**							
	Total						**140.49**	**242.00**	**33999.00**
6	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	Durga Layout								
	1st Cross Road	Cum	1	156.10	1.10	0.15	25.76		
	4th Main Road	Cum	2	165.00	1.10	0.15	54.45		
	Sapthagiri Layout								
	1st Cross Road	Cum	2	121.00	1.10	0.15	39.93		
	Culvert								
	Durga Layout								
	8th Cross Road	Cum	1	7.70	1.70	0.15	1.96		
	4th Cross Road	Cum	1	7.60	1.40	0.15	1.60		
	4th Cross Road	Cum	1	7.40	1.70	0.15	1.89		
	Sapthagiri Layout								
	1st Cross Road	Cum	1	5.10	1.40	0.15	1.07		
		Cum	2	5.20	1.40	0.15	2.18		
		Cum	1	5.90	1.40	0.15	1.24		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**130.08**	**6327.20**	**823024.00**
7	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Bottom Raft	Cum							
	Durga Layout								
	1st Cross Road	Cum	1	156.10	0.90	0.15	21.07		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	4th Main Road	Cum	2	165.00	0.90	0.15	44.55		
	Sapthagiri Layout								
	1st Cross Road	Cum	2	121.00	0.90	0.15	32.67		
	Side Wall								
	Durga Layout								
	1st Cross Road	Cum	2	156.10	0.15	0.75	35.12		
	4th Cross Road	Cum	4	165.00	0.15	0.75	74.25		
	Sapthagiri Layout								
	1st Cross Road	Cum	4	121.00	0.15	0.75	54.45		
						Sub Total	**262.12**		
	Culvert								
	Bottom Raft	Cum							
	Durga Layout								
	8th Cross Road	Cum	1	7.70	1.50	0.20	2.31		
	4th Cross Road	Cum	1	7.60	1.20	0.20	1.82		
	4th Cross Road	Cum	1	7.40	1.50	0.20	2.22		
	Sapthagiri Layout								
	1st Cross Road	Cum	1	5.10	1.20	0.20	1.22		
		Cum	2	5.20	1.20	0.20	2.50		
		Cum	1	5.90	1.20	0.20	1.42		
	Side Wall								
	Durga Layout								
	8th Cross Road	Cum	2	7.70	0.23	0.60	2.13		
	4th Cross Road	Cum	2	7.60	0.23	0.50	1.75		
	4th Cross Road	Cum	2	7.40	0.23	0.60	2.04		
	Sapthagiri Layout								
	1st Cross Road	Cum	2	5.10	0.23	0.60	1.41		
		Cum	4	5.20	0.23	0.60	2.87		
		Cum	2	5.90	0.23	0.60	1.63		
						Sub Total	**23.31**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**285.43**	**7225.68**	**2062412.00**
8	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					262.12		
		kg	Steel assumed 60Kg/Cum of Concrete				15726.96		
		tonne					**15.73**		
	For Culvert	Cum					23.31		
		kg	Steel assumed 90 Kg/Cum of Concrete				2098.08		
		tonne					**2.10**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**17.83**	**113661.90**	**2026028.00**
9	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Durga Layout								
	1st Cross Road	Sqm	1	156.10	0.90		140.49		
	4th Main Road	Sqm	2	165.00	0.90		297.00		
	Sapthagiri Layout								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	1st Cross Road	Sqm	2	121.00	0.90		217.80		
	Data rate	**2072.00**							
	Total						**655.29**	**2072.00**	**1357761.00**
10	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab								
	Durga Layout								
	8th Cross Road	Sqm	1	7.70	1.50		11.55		
	4th Cross Road	Sqm	1	7.60	1.20		9.12		
	4th Cross Road	Sqm	1	7.40	1.50		11.10		
	Sapthagiri Layout								
	1st Cross Road	Sqm	1	5.10	1.20		6.12		
		Sqm	2	5.20	1.20		12.48		
		Sqm	1	5.90	1.20		7.08		
	Data rate	**5037.00**							
	Total						**57.45**	**5037.00**	**289376.00**
11	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	Road Cut Portion	**Cum**							
	Durga Layout								
	1st Cross Road								
		Cum	1	2.00	1.50	0.23	0.69		
		Cum	1	10.00	0.90	0.23	2.07		
		Cum	1	156.10	1.00	0.23	35.90		
	4th Main Road								
		Cum	1	2.00	0.90	0.23	0.41		
		Cum	1	10.00	0.75	0.23	1.73		
		Cum	1	6.00	1.00	0.23	1.38		
		Cum	1	165.00	1.00	0.23	37.95		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**80.13**	**71.50**	**5730.00**
12	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A)								
	Road Cut Portion	Cum							
	Durga Layout								
	1st Cross Road								
		Cum	1	2.00	1.50	0.23	0.69		
		Cum	1	10.00	0.90	0.23	2.07		
		Cum	1	156.10	1.00	0.23	35.90		
	4th Main Road								
		Cum	1	2.00	0.90	0.23	0.41		
		Cum	1	10.00	0.75	0.23	1.73		
		Cum	1	6.00	1.00	0.23	1.38		
		Cum	1	165.00	1.00	0.23	37.95		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**80.13**	**2633.40**	**211020.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
13	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	Road Cut Portion								
	Durga Layout								
	1st Cross Road								
		Sqm	1	2.00	1.50		3.00		
		Sqm	1	10.00	0.90		9.00		
		Sqm	1	156.10	1.00		156.10		
	4th Main Road								
		Sqm	1	2.00	0.90		1.80		
		Sqm	1	10.00	0.75		7.50		
		Sqm	1	6.00	1.00		6.00		
		Sqm	1	165.00	1.00		165.00		
	Provide 20% Profile Correction for old Road								
	Durga Layout								
	1st Cross Road	Sqm	0.2	156.10	6.20		193.56		
	4th Main Road	Sqm	0.2	165.00	5.30		174.90		
	Basic rate	44.00							
	Area weightage 10%	4.40							
	Sub Total	**48.40**							
	Total						**716.86**	**48.40**	**34697.00**
14	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	Road Cut Portion								
	Durga Layout								
	1st Cross Road								
		Cum	1	2.00	1.50	0.05	0.15		
		Cum	1	10.00	0.90	0.05	0.45		
		Cum	1	156.10	1.00	0.05	7.81		
	4th Main Road								
		Cum	1	2.00	0.90	0.05	0.09		
		Cum	1	10.00	0.75	0.05	0.38		
		Cum	1	6.00	1.00	0.05	0.30		
		Cum	1	165.00	1.00	0.05	8.25		
	Provide 20% Profile Correction for old Road								
	Durga Layout								
	1st Cross Road	Cum	0.2	156.10	6.20	0.05	9.68		
	4th Main Road	Cum	0.2	165.00	5.30	0.05	8.75		
	Basic rate	9889.00							
	Area weightage 10%	988.90							
	Sub Total	**10877.90**							
	Total						**35.84**	**10877.90**	**389899.00**
15	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	Durga Layout								
	1st Cross Road	Sqm	1	156.10	6.20		967.82		
	4th Main Road	Sqm	1	165.00	5.30		874.50		
	Basic rate	15.00							
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**1842.32**	**16.50**	**30399.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
16	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16C)								
	Durga Layout	**Cum**							
	1st Cross Road	Cum	1	156.10	6.20	0.04	38.71		
	4th Main Road	Cum	1	165.00	5.30	0.04	34.98		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**73.69**	**12684.10**	**934727.00**
17	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
	Durga Layout	**Sqm**							
	1st Cross Road	Sqm	2	156.10	0.10		31.22		
	4th Main Road	Sqm	2	165.00	0.10		33.00		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**64.22**	**525.80**	**33767.00**
18	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Qty Vide frm Item No-01+03+11	**Cum**					**1023.46**		
	Total						**1023.46**	**129.80**	**132846.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
19	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-18	**t.Km**		1023.46	1.28		**1310.03**		
	Total						**1310.03**	**105.60**	**138340.00**
	Basic rate	12.00							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							
								Grand Total	**8749530.00**
								GST Charges (12% of estimated cost)	**1049944.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
								Miscellenious and rounding	526.00
								Total Amount	10000000.00
								RUPEES ONE CRORE ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
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Assistant Executive Engineer
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Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Executive Engineer
BBMP

RUDRAPRASAD CONSULTANTS
BANGALORE

11

DETAILED ESTIMATE

For the Work of

"Improvements to Roads and Drains at Thindlu and Surrounding area in Ward No.09 (Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)

11)Improvements to Roads and Drains at Thindlu and Surrounding area in Ward No.09 (Vidyaranyapura)

								Estimation Cost.Rs	**10000000.00**
Sl No	**Description of work**	**Unit**	**Mesurement**				**Qty**	**Rate**	**Amount**
			No.	**L**	**B**	**D**			
1	**Removing and refixing stone slabs of drains and pointing in CM (1:3) (Data Rate)**								
	BS Drain Cover Slab	**Sqm**							
	Thindlu Surrounding								
	B.K Layout								
	Cross Road	Sqm	2	100.60	0.90		181.08		
	1st Cross Road								
	RHS	Sqm	1	88.00	0.90		79.20		
					Total		**260.28**		
	Deduct 30% for Missing/Damaged						78.08		
	Consider 70% Qnty for Removing & Refixing						182.20		
					Sub Total		**182.20**		
	Data rate	**121.00**							
	Total						**182.20**	**121.00**	**22046.00**
2	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	2	89.00	1.10	1.05	205.59		
	1st C Cross Road	Cum	2	77.00	0.95	1.05	153.62		
	1st D Cross Road	Cum	2	79.00	0.95	1.05	157.61		
	For Culvert								
	Thindlu Surrounding								
	1st Main Road	Cum	2	5.50	1.40	1.10	16.94		
		Cum	3	6.10	1.40	1.10	28.18		
	Desilt								
	Thindlu Surrounding								
	B.K Layout								
	Cross Road	Cum	2	100.60	0.45	0.45	40.74		
	1st Cross Road								
	RHS	Cum	1	88.00	0.45	0.45	17.82		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**620.50**	**204.60**	**126954.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
3	Providing Granite Slabs of 10cm thick Seclected quality roughly dressed and fixed in cement mortar (1:6) including fixing curing ete., (Data Rate)								
		Sqm							
	Provide 30% for Missing/Damaged	From item no.01					**78.08**		
	Data rate	**837.00**							
	Total						**78.08**	**837.00**	**65357.00**
4	Providing one line dressing to granite stone slab / granite stone masonry as per specifications (Data Rate)								
		Sqm							
	For B S Slab	From total quantity of BS Cover of item no.01					**260.28**		
	Date Rate	**242.00**							
	Total						**260.28**	**242.00**	**62988.00**
5	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	2	89.00	1.10	0.15	29.37		
	1st C Cross Road	Cum	2	77.00	0.95	0.15	21.95		
	1st D Cross Road	Cum	2	79.00	0.95	0.15	22.52		
	For Culvert								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	2	5.50	1.40	0.15	2.31		
		Cum	3	6.10	1.40	0.15	3.84		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**79.98**	**6327.20**	**506069.00**
6	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Bottom Raft								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	2	89.00	0.90	0.15	24.03		
	1st C Cross Road	Cum	2	77.00	0.75	0.15	17.33		
	1st D Cross Road	Cum	2	79.00	0.75	0.15	17.78		
	Side Wall								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	4	89.00	0.15	0.75	40.05		
	1st C Cross Road	Cum	4	77.00	0.15	0.75	34.65		
	1st D Cross Road	Cum	4	79.00	0.15	0.75	35.55		
					Sub Total		**169.38**		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Culvert								
	Bottom Raft	Cum							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	2	5.50	1.20	0.20	2.64		
		Cum	3	6.10	1.20	0.20	4.39		
	Side Wall								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	4	5.50	0.23	0.75	3.80		
		Cum	6	6.10	0.23	0.75	6.31		
					Sub Total		**17.14**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**186.52**	**7225.68**	**1347738.00**
7	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					169.38		
		kg	Steel assumed 60Kg/Cum of Concrete				10162.80		
		tonne					**10.16**		
	For Culvert	Cum					17.14		
		kg	Steel assumed 90 Kg/Cum of Concrete				1542.65		
		tonne					**1.54**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**11.71**	**113661.90**	**1330464.00**
8	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	2	89.00	0.90		160.20		
	1st C Cross Road	Sqm	2	77.00	0.75		115.50		
	1st D Cross Road	Sqm	2	79.00	0.75		118.50		
	Data rate	**2072.00**							
	Total						**394.20**	**2072.00**	**816783.00**
9	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	2	5.50	1.20		13.20		
		Sqm	3	6.10	1.20		21.96		
	Data rate	**5037.00**							
	Total						**35.16**	**5037.00**	**177101.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
10	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	New Road	**Cum**							
	For CC Road								
	1st Cross Road	Cum	1	88.00	4.60	0.10	40.48		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**40.48**	**71.50**	**2895.00**
11	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead MORTH Specification No. 305.4.3 PWD SR 21-22 Vol III Pg no 15 Item No 3.5)								
	For new Road	Sqm							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	1	89.00	5.80		516.20		
	1st C Cross Road	Sqm	1	77.00	5.50		423.50		
	1st D Cross Road	Sqm	1	79.00	5.50		434.50		
	B.K Layout								
	Cross Road	Sqm	1	100.60	4.80		482.88		
	Basic rate	4.00							
	Area weightage 10%	0.40							
	Sub Total	**4.40**							
	Total						**1857.08**	**4.40**	**8172.00**
12	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A)								
	For New Road	**Cum**							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	1	89.00	5.80	0.23	118.73		
	1st C Cross Road	Cum	1	77.00	5.50	0.23	97.41		
	1st D Cross Road	Cum	1	79.00	5.50	0.23	99.94		
	B.K Layout								
	Cross Road	Cum	1	100.60	4.80	0.23	111.06		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**427.13**	**2633.40**	**1124800.00**
13	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	New Road	Sqm							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	1	89.00	5.80		516.20		
	1st C Cross Road	Sqm	1	77.00	5.50		423.50		
	1st D Cross Road	Sqm	1	79.00	5.50		434.50		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	B.K Layout								
	Cross Road	Sqm	1	100.60	4.80		482.88		
	Basic rate	44.00							
	Area weightage 10%	4.40							
	Sub Total	**48.40**							
	Total						**1857.08**	**48.40**	**89883.00**
14	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	1	89.00	5.80	0.05	25.81		
	1st C Cross Road	Cum	1	77.00	5.50	0.05	21.18		
	1st D Cross Road	Cum	1	79.00	5.50	0.05	21.73		
	B.K Layout								
	Cross Road	Cum	1	100.60	4.80	0.05	24.14		
	Basic rate	9889.00							
	Area weightage 10%	988.90							
	Sub Total	**10877.90**							
	Total						**92.85**	**10877.90**	**1010057.00**
15	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	1	89.00	5.80		516.20		
	1st C Cross Road	Sqm	1	77.00	5.50		423.50		
	1st D Cross Road	Sqm	1	79.00	5.50		434.50		
	B.K Layout								
	Cross Road	Sqm	1	100.60	4.80		482.88		
	Basic rate	15.00							
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**1857.08**	**16.50**	**30642.00**
16	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16C)								
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Cum	1	89.00	5.80	0.04	20.65		
	1st C Cross Road	Cum	1	77.00	5.50	0.04	16.94		
	1st D Cross Road	Cum	1	79.00	5.50	0.04	17.38		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	B.K Layout								
	Cross Road	Cum	1	100.60	4.80	0.04	19.32		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**74.28**	**12684.10**	**942216.00**
17	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
		Sqm							
	Thindlu Surrounding								
	K Veeranna Layout								
	1st Main Road	Sqm	2	89.00	0.10		17.80		
	1st C Cross Road	Sqm	2	77.00	0.10		15.40		
	1st D Cross Road	Sqm	2	79.00	0.10		15.80		
	B.K Layout								
	Cross Road	Sqm	2	100.60	0.10		20.12		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**69.12**	**525.80**	**36344.00**
18	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately MORTH Specification No. 202(PWD SR 2021-22 Vol -III P.No.10 - I.No.2.19)								
	1st Cross Road	Cum	1	88.00	4.60	0.20	80.96		
	Basic rate	422.00							
	Area weightage 10%	42.20							
	Sub Total	**464.20**							
	Total						**80.96**	**464.20**	**37582.00**
19	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates (PWD SR 21-22 Vol-I Pg no 15 Item No 2.1.1)								
	1st Cross Road	Cum	1	88.00	4.60	0.15	60.72		
	Basic rate	4976.00							
	Area weightage 10%	497.60							
	Sub Total	**5473.60**							
	Total						**60.72**	**5473.60**	**332357.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
20	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14- days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete MORTH Specification No.1501 . as per the directions of the Engineer-in-charge of the work. (PWD SR 2021-22 Vol -III Pg 138 item no 20.29)								
	New Road								
	1st Cross Road	Cum	1	88.00	4.60	0.15	60.72		
	Basic rate	6837.00							
	Area weightage 10%	683.70							
	Sub Total	**7520.70**							
	Total						**60.72**	**7520.70**	**456657.00**
21	Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm in concrete slab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay / slab etc. complete including subsequent widening of the groove 8 to 10 mm. wide at top having depth of 15 mm. as directed by Engineer incharge. MORTH Specification No. 602.6.3(PWD SR 2021-22 Vol -III Pg 146 item no 4)								
		m	22	4.60			101.20		
	Basic rate	70.00							
	Area weightage 10%	7.00							
	Sub Total	**77.00**							
	Total						**101.20**	**77.00**	**7793.00**
22	Providing to contraction joints polysuphide sealent (Pouring grade) confirming to BS : 5212 - 1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (approx. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8mm.wide). MORTH Specification No. 602.6.3(PWD SR 2021-22 Vol -III Pg 147 item no 5)								
	Qty Vide frm Item No-26	m					101.20		
	Basic rate	165.00							
	Area weightage 10%	16.50							
	Sub Total	**181.50**							
	Total						**101.20**	**181.50**	**18368.00**
23	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)								
	Qty Vide frm Item No-02+10+18	**Cum**					**741.94**		
	Total						**741.94**	**129.80**	**96304.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
24	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-23	**t.Km**		741.94	1.28		**949.68**		
	Total						**949.68**	**105.60**	**100286.00**
	Basic rate	12.00							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							
								Grand Total	**8749856.00**
								GST Charges (12% of estimated cost)	**1049983.00**
								DPR Charges (1% of estimated cost)	**100000.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Project management And Consultancy Charges(1% of estimated cost)								100000.00
	Miscellenious and rounding								161.00
								Total Amount	10000000.00
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
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Assistant Executive Engineer
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Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

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R. PRASAD CONSULTANTS BANGALORE

12

DETAILED ESTIMATE

For the Work of

"Improvements to Road and Drains at Virupakshapura and Surrounding area in Ward No.09 (Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)"

12) Improvements to Road and Drains at Virupakshapura and Surrounding area in Ward No.09 (Vidyaranyapura)

									Estimation Cost.Rs	**10000000.00**
Sl No	**Description of work**	**Unit**	**Mesurement**				**Qty**	**Rate**	**Amount**	
			No.	**L**	**B**	**D**				
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))									
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	1	7.00	1.20	0.23	1.93			
	Basic rate	731.00								
	Area weightage 10%	73.10								
	Sub Total	**804.10**								
	Total						**1.93**	**804.10**	**1554.00**	
2	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)									
	New Drain	**Cum**								
	Virupakshapura									
	Behind Maramma Temple	Cum	1	224.40	1.10	1.05	259.18			
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	132.00	1.10	1.05	304.92			
		Cum	1	122.00	1.10	1.05	140.91			
	Culvert									
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	7.00	1.40	0.95	18.62			
		Cum	1	6.00	1.40	0.95	7.98			
	Basic rate	186.00								
	Area weightage 10%	18.60								
	Sub Total	**204.60**								
	Total						**731.61**	**204.60**	**149688.00**	
3	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)									
	For Drain	**Cum**								
	Virupakshapura									
	Behind Maramma Temple	Cum	1	224.40	1.10	0.15	37.03			
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	132.00	1.10	0.15	43.56			
		Cum	1	122.00	1.10	0.15	20.13			
	Culvert									
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	7.00	1.40	0.15	2.94			
		Cum	1	6.00	1.40	0.15	1.26			
	Basic rate	5752.00								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**104.92**	**6327.20**	**663825.00**
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Bottom Raft	Cum							
	Virupakshapura								
	Behind Maramma Temple	Cum	1	224.40	0.90	0.15	30.29		
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	132.00	0.90	0.15	35.64		
		Cum	1	122.00	0.90	0.15	16.47		
	Side Wall								
	Behind Maramma Temple	Cum	2	224.40	0.15	0.75	50.49		
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	4	132.00	0.15	0.75	59.40		
		Cum	2	122.00	0.15	0.75	27.45		
						Sub Total	**219.74**		
	Culvert								
	Bottom Raft	Cum							
	Maruthi Layout Main Road	Cum	2	7.00	1.20	0.20	3.36		
		Cum	1	6.00	1.20	0.20	1.44		
	Side Wall								
	Maruthi Layout Main Road	Cum	4	7.00	0.23	0.60	3.86		
		Cum	2	6.00	0.23	0.60	1.66		
						Sub Total	**10.32**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**230.06**	**7225.68**	**1662369.00**
5	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					219.74		
		kg	Steel assumed 60Kg/Cum of Concrete				13184.64		
		tonne					**13.18**		
	For Culvert	Cum					10.32		
		kg	Steel assumed 90 Kg/Cum of Concrete				928.80		
		tonne					**0.93**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**14.11**	**113661.90**	**1604161.00**
6	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Virupakshapura								
	Behind Maramma Temple	Sqm	1	224.40	0.90		201.96		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Sqm	2	132.00	0.90		237.60		
		Sqm	1	122.00	0.90		109.80		
	Data rate	**2072.00**							
	Total						**549.36**	**2072.00**	**1138274.00**
7	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab	Sqm							
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Sqm	2	7.00	1.20		16.80		
		Sqm	1	6.00	1.20		7.20		
	Data rate	**5037.00**							
	Total						**24.00**	**5037.00**	**120888.00**
8	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	Road Cut Portion	**Cum**							
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	7.70	1.10	0.23	3.90		
		Cum	1	8.90	1.40	0.23	2.87		
		Cum	2	8.60	1.30	0.23	5.14		
		Cum	1	11.00	1.50	0.23	3.80		
		Cum	1	10.00	1.60	0.23	3.68		
		Cum	1	250.00	0.45	0.23	25.88		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**45.25**	**71.50**	**3236.00**
9	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead MORTH Specification No. 305.4.3 PWD SR 21-22 Vol III Pg no 15 Item No 3.5)								
	For new Road	Sqm							
	Virupakshapura								
	Behind Maramma Temple	Sqm	1	224.40	5.20		1166.88		
	Basic rate	4.00							
	Area weightage 10%	0.40							
	Sub Total	**4.40**							
	Total						**1166.88**	**4.40**	**5135.00**
10	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A)								
	For New Road	**Cum**							
	Virupakshapura								
	Behind Maramma Temple	Cum	1	224.40	5.20	0.23	268.38		
	Road Cut Portion								
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	7.70	1.10	0.23	3.90		
		Cum	1	8.90	1.40	0.23	2.87		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
		Cum	2	8.60	1.30	0.23	5.14		
		Cum	1	11.00	1.50	0.23	3.80		
		Cum	1	10.00	1.60	0.23	3.68		
		Cum	1	250.00	0.45	0.23	25.88		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**313.64**	**2633.40**	**825933.00**
11	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	New Road	Sqm							
	Virupakshapura								
	Behind Maramma Temple	Sqm	1	224.40	5.20		1166.88		
	Road Cut Portion								
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Sqm	2	7.70	1.10		16.94		
		Sqm	1	8.90	1.40		12.46		
		Sqm	2	8.60	1.30		22.36		
		Sqm	1	11.00	1.50		16.50		
		Sqm	1	10.00	1.60		16.00		
		Sqm	1	250.00	0.45		112.50		
	Provide 20% Profile Correction for old Road								
	Virupakshapura								
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Sqm	0.20	250.00	5.60		280.00		
	Basic rate	44.00							
	Area weightage 10%	4.40							
	Sub Total	**48.40**							
	Total						**1643.64**	**48.40**	**79553.00**
12	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	Virupakshapura								
	Behind Maramma Temple	Cum	1	224.40	5.20	0.05	58.34		
	Road Cut Portion								
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	2	7.70	1.10	0.05	0.85		
		Cum	1	8.90	1.40	0.05	0.62		
		Cum	2	8.60	1.30	0.05	1.12		
		Cum	1	11.00	1.50	0.05	0.83		
		Cum	1	10.00	1.60	0.05	0.80		
		Cum	1	250.00	0.45	0.05	5.63		
	Provide 20% Profile Correction for old Road								
	Virupakshapura								
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	0.20	250.00	5.60	0.05	14.00		
	Basic rate	9889.00							
	Area weightage 10%	988.90							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Sub Total	**10877.90**							
	Total						**82.18**	**10877.90**	**893968.00**
13	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	Virupakshapura								
	Behind Maramma Temple	Cum	1	224.40	5.20		1166.88		
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	1	250.00	5.60		1400.00		
	Basic rate	15.00							
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**2566.88**	**16.50**	**42354.00**
14	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16)								
	Virupakshapura								
	Behind Maramma Temple	Cum	1	224.40	5.20	0.04	46.68		
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Cum	1	250.00	5.60	0.04	56.00		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**102.68**	**12684.10**	**1302343.00**
15	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
	Virupakshapura	**Sqm**							
	Behind Maramma Temple	Sqm	2	224.40	0.10		44.88		
	Maruthi Layout Main Road (Arch to Railway parallel Rd)	Sqm	2	250.00	0.10		50.00		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**94.88**	**525.80**	**49888.00**
16	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Qty Vide frm Item No-01+02+08	**Cum**					**778.80**		
	Total						**778.80**	**129.80**	**101089.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
17	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-16	**t.Km**		778.80	1.28		**996.86**		
	Total						**996.86**	**105.60**	**105269.00**
	Basic rate	12.00							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
								Grand Total	**8749527.00**
								GST Charges (12% of estimated cost)	**1049944.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**
								Miscellenious and rounding	**529.00**
								Total Amount	**10000000.00**
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Executive Engineer
BBMP

RUDRAPRASAD CONSULTANTS
BANGALORE

13

DETAILED ESTIMATE

For the Work of

"Improvements to Road and Drains at NTI Layout, IECHS Layout, Basavasamithi layout and surrounding area in Ward No.09 (Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:-CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)"

13)Improvements to Road and Drains at NTI Layout, IECHS Layout, Basavasamithi layout and surrounding area in Ward No.09 (Vidyaranyapura)

									Estimation Cost.Rs	**10000000.00**
Sl No	**Description of work**	**Unit**	**Mesurement**				**Qty**	**Rate**	**Amount**	
			No.	**L**	**B**	**D**				
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))									
	IECHS Layout									
		Cum	1	7.50	1.50	0.23	2.59			
		Cum	1	8.90	1.50	0.23	3.07			
	NTI Layout									
	8th Main Road	Cum	2	10.50	1.50	0.23	7.25			
		Cum	1	9.30	1.50	0.23	3.21			
		Cum	1	6.50	1.50	0.23	2.24			
	20th Cross Road	Cum	4	6.20	1.50	0.23	8.56			
	Basic rate	731.00								
	Area weightage 10%	73.10								
	Sub Total	**804.10**								
	Total						**26.91**	**804.10**	**21639.00**	
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) (Data Rate)									
	BS slab of Drain	**Sqm**								
	Open Drain (Sides & Bottom)	**Sqm**	Width=Perimeter of Drain in U Shape							
	IECHS Layout									
	Shiva Temple Road	Sqm	2	115.90	1.35		312.93			
						Total	**312.93**			
	Deduct 30% for Missing/Damaged						93.88			
	Consider 70% Qnty for Removing & Refixing						219.05			
						Sub Total	**219.05**			
	Data rate	**121.00**								
	Total						**219.05**	**121.00**	**26506.00**	
3	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)									
	New Drain	**Cum**								
	IECHS Layout									
	3rd E Cross Road RHS & LHS	Cum	1	57.00	1.10	1.05	65.84			
	NTI layout									
	8th main road	Cum	1	196.00	1.10	1.20	258.72			
	20th ~~Cross Road~~ Main Road LHS & RHS	Cum	2	219.80	1.10	0.90	435.20			
	Culvert									
	IECHS Layout									
		Cum	1	7.50	1.40	0.95	9.98			
		Cum	1	8.90	1.40	0.95	11.84			

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	NTI Layout								
	8th Main Road	Cum	2	10.50	1.70	1.25	44.63		
		Cum	1	9.30	1.70	1.25	19.76		
		Cum	1	6.50	1.70	1.25	13.81		
	20th Cross Road	Cum	4	6.20	1.40	0.95	32.98		
	Desilt								
	IECHS Layout								
	Shiva Temple Road	Cum	2	115.90	0.45	0.45	46.94		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**939.69**	**204.60**	**192262.00**
4	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
		Sqm							
	Provide 30% for Missing/Damaged	From item no.02					**93.88**		
	Basic rate	700.00							
	Area weightage 6%	42.00							
	Sub Total	**742.00**							
	Total						**93.88**	**742.00**	**69659.00**
5	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	IECHS Layout								
	3rd E Cross Road	Cum	1	57.00	1.10	0.15	9.41		
	NTI layout								
	8th main road	Cum	1	196.00	1.10	0.15	32.34		
	20th Cross Road	Cum	2	219.80	1.10	0.15	72.53		
	Culvert								
	IECHS Layout								
		Cum	1	7.50	1.40	0.15	1.58		
		Cum	1	8.90	1.40	0.15	1.87		
	NTI Layout								
	8th Main Road	Cum	2	10.50	1.70	0.15	5.36		
		Cum	1	9.30	1.70	0.15	2.37		
		Cum	1	6.50	1.70	0.15	1.66		
	20th Cross Road	Cum	4	6.20	1.40	0.15	5.21		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**132.32**	**6327.20**	**837184.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
6	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Bottom Raft	**Cum**							
	IECHS Layout								
	3rd E Cross Road	Cum	1	57.00	0.90	0.15	7.70		
	NTI layout								
	8th main road	Cum	1	196.00	0.90	0.15	26.46		
	20th Cross Road	Cum	2	219.80	0.90	0.15	59.35		
	Side Wall								
	IECHS Layout								
	3rd E Cross Road	Cum	2	57.00	0.15	0.75	12.83		
	NTI layout								
	8th main road	Cum	2	196.00	0.15	0.90	52.92		
	20th Cross Road	Cum	4	219.80	0.15	0.60	79.13		
						Sub Total	**238.37**		
	Culvert								
	Bottom Raft								
	IECHS Layout								
		Cum	1	7.50	1.20	0.20	1.80		
		Cum	1	8.90	1.20	0.20	2.14		
	NTI Layout								
	8th Main Road	Cum	2	10.50	1.50	0.20	6.30		
		Cum	1	9.30	1.50	0.20	2.79		
		Cum	1	6.50	1.50	0.20	1.95		
	20th Cross Road	Cum	4	6.20	1.20	0.20	5.95		
	Side Wall								
	IECHS Layout								
		Cum	2	7.50	0.23	0.60	2.07		
		Cum	2	8.90	0.23	0.60	2.46		
	NTI Layout								
	8th Main Road	Cum	4	10.50	0.23	0.90	8.69		
		Cum	2	9.30	0.23	0.90	3.85		
		Cum	2	6.50	0.23	0.90	2.69		
	20th Cross Road	Cum	8	6.20	0.23	0.60	6.84		
						Sub Total	**47.53**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**285.91**	**7225.68**	**2065883.00**
7	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					238.37		
		kg	Steel assumed 60Kg/Cum of Concrete				14302.44		
		tonne					**14.30**		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	For Culvert	Cum					47.53		
		kg	Steel assumed 90 Kg/Cum of Concrete				4278.10		
		tonne					**4.28**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**18.58**	**113661.90**	**2111900.00**
8	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	IECHS Layout								
	3rd E Cross Road	Sqm	1	57.00	0.90		51.30		
	8th main road	Sqm	1	196.00	0.90		176.40		
	20th Cross Road	Sqm	2	219.80	0.90		395.64		
	Data rate	**2072.00**							
	Total						**623.34**	**2072.00**	**1291561.00**
9	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab	Sqm							
	IECHS Layout								
		Sqm	1	7.50	1.20		9.00		
		Sqm	1	8.90	1.20		10.68		
	NTI Layout								
	8th Main Road	Sqm	2	10.50	1.50		31.50		
		Sqm	1	9.30	1.50		13.95		
		Sqm	1	6.50	1.50		9.75		
	20th Cross Road	Sqm	4	6.20	1.20		29.76		
	Data rate	**5037.00**							
	Total						**104.64**	**5037.00**	**527072.00**
10	Providing and fixing Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Electric resistance or induction butt welded tubes including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge. (PWD SR 21-22 Vol-II Pg no 81 Item No 11.16.3)								
	Culvert								
	PLATE	kg	10			71	710.00		
				Steel assumed 71Kg/per Unit					
	2feet dia MS Pipe-Including Elbow	kg	10			148	1480.00		
				Steel assumed 148Kg/per Unit					
	Basic rate	110.00							
	Area weightage 10%	11.00							
	Sub Total	**121.00**							
	Total						**2190.00**	**121.00**	**264990.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
11	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	Road Cut Portion	**Cum**							
	IECHS Layout								
	Shiva Temple Road	Cum	2	5.50	1.30	0.23	3.29		
		Cum	1	11.20	1.30	0.23	3.35		
		Cum	1	9.50	1.80	0.23	3.93		
		Cum	1	4.10	1.00	0.23	0.94		
		Cum	2	6.30	1.50	0.23	4.35		
		Cum	2	7.10	1.30	0.23	4.25		
		Cum	2	10.20	1.50	0.23	7.04		
		Cum	1	115.90	0.50	0.23	13.33		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**40.47**	**71.50**	**2894.00**
12	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead MORTH Specification No. 305.4.3 PWD SR 21-22 Vol III Pg no 15 Item No 3.5)								
	For new Road	Sqm							
	IECHS Layout								
	3rd E Cross Road	Sqm	1	57.00	4.70		267.90		
	Basic rate	4.00							
	Area weightage 10%	0.40							
	Sub Total	**4.40**							
	Total						**267.90**	**4.40**	**1179.00**
13	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A)								
	For New Road	**Cum**							
	IECHS Layout								
	3rd E Cross Road	Cum	1	57.00	4.70	0.23	61.62		
	Road Cut Portion	Cum							
	IECHS Layout								
	Shiva Temple Road	Cum	2	5.50	1.30	0.23	3.29		
		Cum	1	11.20	1.30	0.23	3.35		
		Cum	1	9.50	1.80	0.23	3.93		
		Cum	1	4.10	1.00	0.23	0.94		
		Cum	2	6.30	1.50	0.23	4.35		
		Cum	2	7.10	1.30	0.23	4.25		
		Cum	2	10.20	1.50	0.23	7.04		

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
		Cum	1	115.90	0.50	0.23	13.33		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**102.09**	**2633.40**	**268845.00**
14	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	IECHS Layout								
	3rd E Cross Road	Sqm	1	57.00	4.70		267.90		
	IECHS Layout								
	Shiva Temple Road	Sqm	2	5.50	1.30		14.30		
		Sqm	1	11.20	1.30		14.56		
		Sqm	1	9.50	1.80		17.10		
		Sqm	1	4.10	1.00		4.10		
		Sqm	2	6.30	1.50		18.90		
		Sqm	2	7.10	1.30		18.46		
		Sqm	2	10.20	1.50		30.60		
		Sqm	1	115.90	0.50		57.95		
	Provide 20% Profile Correction for old Road								
	IECHS Layout								
	Shiva Temple Road	Sqm	0.2	115.90	5.10		118.22		
	Basic rate	44.00							
	Area weightage 10%	4.40							
	Sub Total	**48.40**							
	Total						**562.09**	**48.40**	**27206.00**
15	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	IECHS Layout								
	3rd E Cross Road	Cum	1	57.00	4.70	0.05	13.40		
	3rd E CROSS Road								
	IECHS Layout								
	Shiva Temple Road	Cum	2	5.50	1.30	0.05	0.72		
		Cum	1	11.20	1.30	0.05	0.73		
		Cum	1	9.50	1.80	0.05	0.86		
		Cum	1	4.10	1.00	0.05	0.21		
		Cum	2	6.30	1.50	0.05	0.95		
		Cum	2	7.10	1.30	0.05	0.92		
		Cum	2	10.20	1.50	0.05	1.53		
		Cum	1	115.90	0.50	0.05	2.90		
	Provide 20% Profile Correction for old Road								
	IECHS Layout								
	Shiva Temple Road	Cum	0.2	115.90	5.10	0.05	5.91		
	Basic rate	9889.00							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Area weightage 10%	988.90							
	Sub Total	**10877.90**							
	Total						**28.10**	**10877.90**	**305717.00**
16	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	IECHS Layout								
	3rd E Cross Road	Sqm	1	57.00	4.70		267.90		
	Shiva Temple Road	Sqm	1	115.90	5.10		591.09		
	Basic rate	15.00							
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**858.99**	**16.50**	**14174.00**
17	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16C)								
	IECHS Layout								
	3rd E Cross Road	Cum	1	57.00	4.70	0.04	10.72		
	Shiva Temple Road	Cum	1	115.90	5.10	0.04	23.64		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**34.36**	**12684.10**	**435821.00**
18	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
	IECHS Layout								
	3rd E Cross Road	Sqm	2	57.00	0.10		11.40		
	Shiva Temple Road	Sqm	2	115.90	0.10		23.18		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**34.58**	**525.80**	**18183.00**
19	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Qty Vide frm Item No-01+03+11	**Cum**					**1007.08**		
	Total						**1007.08**	**129.80**	**130719.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
20	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-19	**t.Km**		1007.08	1.28		**1289.06**		
	Total						**1289.06**	**105.60**	**136125.00**
	Basic rate	**12.00**							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							
								Grand Total	**8749519.00**
								GST Charges (12% of estimated cost)	**1049943.00**
								DPR Charges (1% of estimated cost)	**100000.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Project management And Consultancy Charges(1% of estimated cost)								100000.00
	Miscellenious and rounding								538.00
								Total Amount	10000000.00
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Executive Engineer
BBMP

14

DETAILED ESTIMATE

For the Work of

"Improvements to Road and Drains at Defence Layout and Surroundings area in ward No.09 (Vidyaranyapura)"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:-CONSULTANCY SERVICE FOR DETAILED PROJECT REPORT, FIELD SURVEY, GENERAL REPORT, BASIC DRAWING, TECHNICAL REPORT, DETAILED DRAWING, DETAILED COST ESTIMATE FOR PACKAGE NO. 06 (PACKAGE CONSISTS OF 14 WORKS)"

14)Improvements to Road and Drains at Defence Layout and Surroundings area in ward No.09 (Vidyaranyapura)

								Estimation Cost.Rs	**10000000.00**
Sl No	**Description of work**	**Unit**	**Mesurement**				**Qty**	**Rate**	**Amount**
			No.	**L**	**B**	**D**			
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	5th Cross Road								
	LHS	Cum	1	553.20	1.10	0.90	547.67		
	9th Main Road								
	RHS	Cum	1	218.60	1.10	1.05	252.48		
	4th Main LHS		1	219.00	1.10	1.05	252.95		
	Culvert								
	Defence Layout								
	5th Cross Road	Cum	2	10.90	1.40	0.95	28.99		
		Cum	1	9.70	1.40	0.95	12.90		
	4th Cross Road (Beside Park) & 9th Road	Cum	1	10.40	1.40	0.95	13.83		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**1108.82**	**204.60**	**226866.00**
2	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	5th Cross Road								
	LHS	Cum	1	553.20	1.10	0.15	91.28		
	9th Main Road								
	RHS	Cum	1	218.60	1.10	0.15	36.07		
	4th Main LHS		1	219.00	1.10	0.15	36.14		
	Culvert								
	Defence Layout								
	5th Cross Road	Cum	2	10.90	1.40	0.15	4.58		
		Cum	1	9.70	1.40	0.15	2.04		
	4th Cross Road (Beside Park) & 9th Road	Cum	1	10.40	1.40	0.15	2.18		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**172.28**	**6327.20**	**1090057.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol - I Pg 17 item no 2.4.2)								
	Bottom Raft	Cum							
	5th Cross Road								
	LHS	Cum	1	553.20	0.90	0.15	74.68		
	9th Main Road								
	RHS	Cum	1	218.60	0.90	0.15	59.08		
	4th Main LHS		1	219.00	0.90	0.15	59.08		
	Side Wall								
	5th Cross Road								
	LHS	Cum	2	553.20	0.15	0.60	99.58		
	9th Main Road								
	RHS	Cum	2	218.60	0.15	0.75	98.46		
	4th Main LHS		2	219.00	0.15	0.75	98.46		
					Sub Total		**331.79**		
	Culvert								
	Defence Layout								
	5th Cross Road	Cum	2	10.90	1.20	0.20	5.23		
		Cum	1	9.70	1.20	0.20	2.33		
	4th Cross Road (Beside Park) & 9th Road	Cum	1	10.40	1.20	0.20	2.50		
	Side Wall								
	Defence Layout								
	5th Cross Road	Cum	4	10.90	0.23	0.60	6.02		
		Cum	2	9.70	0.23	0.60	2.68		
	4th Cross Road (Beside Park) & 9th Road	Cum	2	10.40	0.23	0.60	2.87		
					Sub Total		**21.62**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**353.41**	**7225.68**	**2553660.00**
4	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					331.79		
		kg	Steel assumed 60Kg/Cum of Concrete				19907.64		
		tonne					**19.91**		
	For Culvert	Cum					21.62		
		kg	Steel assumed 90Kg/Cum of Concrete				1945.84		
		tonne					**1.95**		
	Basic rate	103329.00							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**21.85**	**113661.90**	**2483908.00**
5	Providing and Fixing pre cast covering Slab 100mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	5th Cross Road								
	LHS	Sqm	1	553.20	0.90		497.88		
	9th Main Road								
	RHS	Cum	1	218.60	0.90		196.74		
	4th Main LHS		1	219.00	0.90		197.10		
	Data rate	**2072.00**							
	Total						**891.72**	**2072.00**	**1847644.00**
6	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
	Culvert cover Slab	Sqm							
	Defence Layout								
	5th Cross Road	Sqm	2	10.90	1.20		26.16		
		Sqm	1	9.70	1.20		11.64		
	4th Cross Road (Beside Park) & 9th Road	Sqm	1	10.40	1.20		12.48		
	Data rate	**5037.00**							
	Total						**50.28**	**5037.00**	**253261.00**
7	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 5.5 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1A)								
	Qty Vide frm Item No-01	**Cum**					**1108.82**		
	Total						**1108.82**	**129.80**	**143926.00**
	Basic rate	118.00							
	Area Weightage 10%	11.80							
	Total	**129.80**							
8	**Cost of Haulage** Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4A)								
	Qty frm Item No-07	**t.Km**		1108.82	1.28		**1419.29**		
	Total						**1419.29**	**105.60**	**149878.00**
	Basic rate	12.00							
	8Km 12*8	96.00							
	Area Weightage 10%	9.60							
	Total	**105.60**							
								Grand Total	**8749200.00**
								GST Charges (12% of estimated cost)	**1049904.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
								Miscellenious and rounding	896.00
								Total Amount	10000000.00
								RUPEES ONE CRORE ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Executive Engineer
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